

**NEW SPECIES OF *Poecilochroa* Westring, 1874 AND
Zelotes Gistel, 1848 (ARANEAE: GNAPHOSIDAE) FROM
TAMIL NADU, INDIA**

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ABSTRACT

Two new species of Ground running spiders from the family Gnaphosidae namely *Poecilochroa tridotus* sp.nov and *Zelotes tambaramensis* sp.nov are described from Chennai (Madras), South India.

Key words: New species, *Poecilochroa*, *Zelotes*, Taxonomy, Scrub Jungle, Chennai, South India

INTRODUCTION

The family Gnaphosidae is represented by 121 Genera and 2147 Species worldwide (Platnick, 2013). In India this family is represented by 30 Genera and 146 Species (Keswani et. al., 2012). Specimens were collected as part of study in Madras Christian College, which encloses a scrub jungle with an expanse of 365 acres on the outskirts of Chennai city.

Spiders of the family Gnaphosidae have received scant attention in the oriental region. Practically there was no work in the past on Gnaphosid spiders from India, although they are abundant throughout the country (Patel, 1989). Most of recent work in India has been done by Tikader & Gajbe (1976, 1979), Tikader (1982), Gajbe (1979, 1992, 2005), Patel (1988, 1989) and Biswas (1984) who have published some papers on this group of spiders.

MATERIALS AND METHODS

Specimens were collected in the field and the live specimens were photographed using Nikon D60, 18-55mm reversed for macro photographs. They were preserved in 70% alcohol and later examined using a Carl Zeiss Stemi-4 stereo-microscope equipped with image processing system. USB digital microscope with Micro-measure Software was used for making measurements. The female genitalia were excised using surgical blades or sharpened needles. The epigyne was then transferred to Petri dish containing KOH 10% solution for clearing. The Type specimen will in due course be deposited in Zoological Survey of India, Regional station, Chennai. Descriptions are based on examination of fresh specimen.

OBSERVATIONS AND RESULTS

Taxonomy

Genus *Poecilochroa* Westring, 1874

Description

Poecilochroa tridotus sp. nov. (Fig. 1a-1g)

Type material: Holotype; 1 female 18.iii.2013. Coll. John Caleb T.D. (GPS 12.920287° N, 80.123523° E, 32 m)

Type Locality: South India, Chennai, Madras Christian College, Scrub Jungle Patches.

Etymology: Species name refers to the three white spots on the abdomen

Diagnosis: This species shows close resemblance to *Poecilochroa barmani* Tikader, but differs by having three white spots on the abdomen; the epigyne and internal genitalia are also structurally different.

Distribution: Known heretofore from Chennai (Madras), S India.

General: Cephalothorax Black with white hairs mid-dorsally; abdomen Blackish with three white spots. Total length 5.26 mm. Carapace 2.62 mm long, 1.75 mm wide; abdomen 2.64 mm long, 1.63 mm wide.

Cephalothorax: Longer than wide, narrowing in front, provided with white pubescence mid-dorsally. Posterior half with fovea. Eyes eight in compact group. Anterior row of eyes recurved shorter than posterior row, Posterior row of eyes less procurved, posterior median eyes pearly white. Clypeus short, Chelicerae black and provided with spine like hairs. Sternum deep brown, clothed with short spine like hairs. Labium and maxillae dark reddish brown in color, longer than wide, anterior end of maxillae provided with conspicuous scopulae. Chelicerae moderately strong, reddish-brown. Legs clothed with hairs and spines. Trochanter of all legs provided dorsally with white hairs. Femur blackish and dorsally provided with faint white hairs.

Abdomen: Longer than wide, narrowing behind, Black and clothed with hairs uniformly and provided with muscular corrugations. One white spot present on the dorsal surface anteriorly and two white spots mid-laterally. Posterior tip of Spinnerets provided with faint white hairs. Epigyne as in (Fig. 1f) internal genitalia as in (Fig. 1g).

Natural History: Found on Bark of a tree among vegetation at MCC campus, consisting of Scrub jungle of 365 acres, comprising 90% of native vegetation. The campus is a part of scrub jungle patches lining the coastal regions in and around Chennai (Madras). The Female constructs an egg sac in the small gaps between the barks

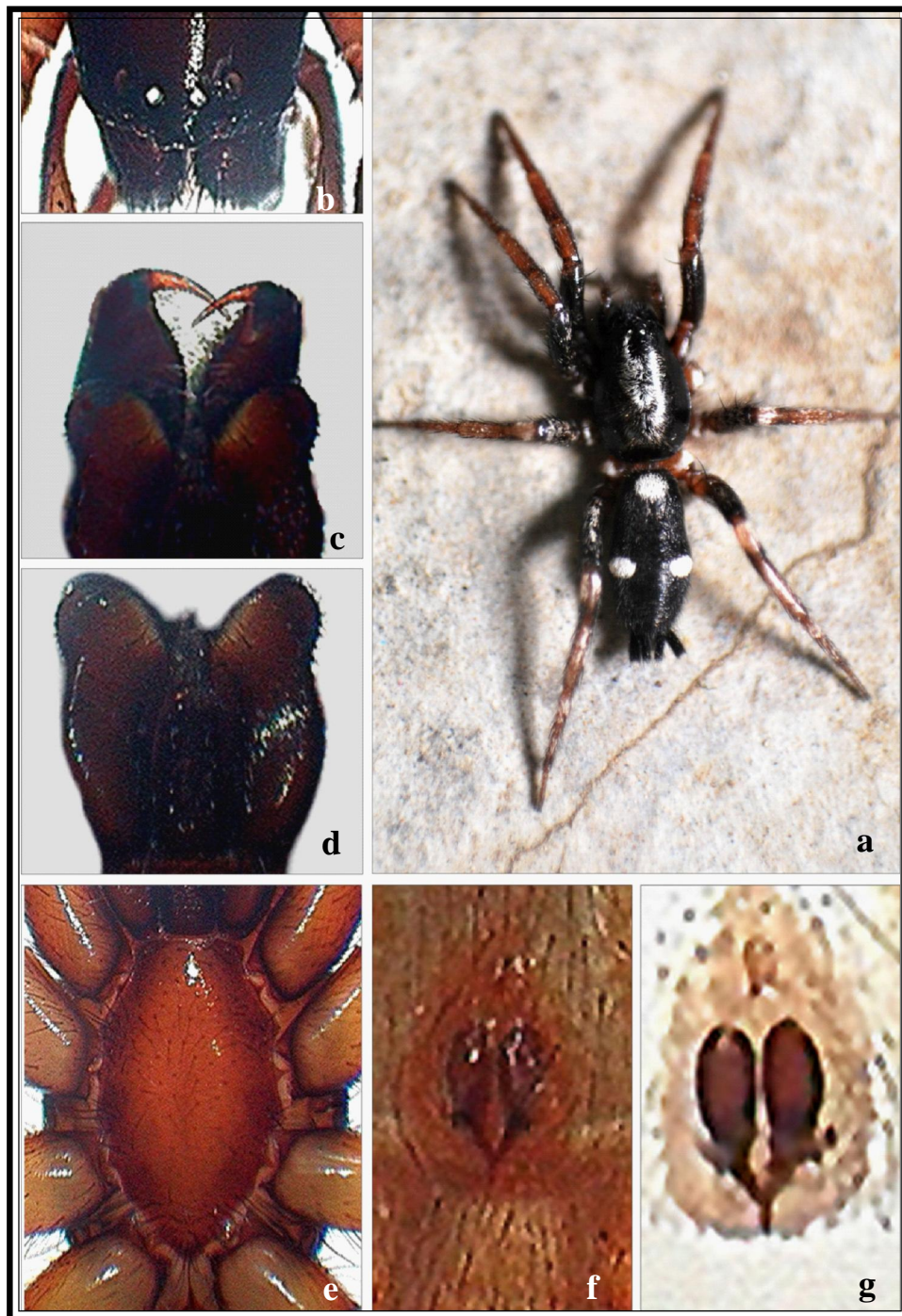


Fig. 1a-1g, *Poecilochroa tridotus* sp. nov.

- (a) Dorsal view of female; (b) Eye arrangement;
(c) Chelicerae; (d) Labium and maxillae; (e) Sternum;
(f) Epigyne; (g) Internal genitalia.**



Fig. 2a-2g, *Zelotes tambaramensis* sp. nov.

- (a) Dorsal view of female
- (b) Eye arrangement
- (c) Chelicerae
- (d) Labium and maxillae
- (e) Sternum
- (f) Epigyne
- (g) Internal genitalia

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Genus *Zelotes* Gistel, 1948

Description

Zelotes tambaramensis sp. nov. (Fig. 2a-2g)

Type material: Holotype - Female 11.iii.2013. Coll. John Caleb T.D. (GPS 12.916899° N, 80.120317° E, 32 m)

Type Locality: South India, Chennai, Madras Christian College, Scrub Jungle Patches.

Etymology: Named after the type locality, Tambaram

Diagnosis: This species shows resemblance to *Zelotes sataraensis* Tikader & Gajbe but differs in having 3 Cheliceral teeth on the outer margin, Epigyne and internal genitalia are structurally different.

Distribution: Known heretofore from Chennai (Madras), S India.

General: Cephalothorax Black; abdomen blackish with brownish hairs. Total length 4.30 mm. Carapace 2.18 mm long, 1.75 mm wide; abdomen 2.12 mm long, 1.30 mm wide.

Cephalothorax: Longer than wide, narrowing in front, covered with hairs uniformly. Inconspicuous short fovea with diverging lateral streaks. Eyes closely grouped, pearly white except anterior medians. Anterior and posterior rows slightly procurved, posterior row slightly longer than the anterior row, anterior median eyes smaller than the laterals. Clypeus short, Chelicerae black and provided with spine like hairs. Sternum oval, clothed with short spine like hairs. Labium and maxillae dark reddish brown, longer than wide. Chelicerae moderately strong, reddish- brown, inner and outer margin provided with one and three teeth respectively. Legs long and strong, clothed with hairs and spines.

Abdomen: Longer than wide, black, clothed with fine golden brown hairs uniformly and provided with muscular corrugations. Spinnerets dark and prominent. Epigyne as in (Fig.2f) internal genitalia (Fig.2g)

Natural History: Found on a patch of ground adjacent to the Sports field in MCC campus. The campus is a part of scrub jungle patches lining the coastal regions in and around Chennai (Madras). They are found running on the ground often when disturbed and move swiftly across the grassy areas. The female constructs a light-pink colored egg sac.

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